

## FOOD PROCESSING

### Preparing food for your plate

Most food goes through some form of **food processing** – washing, cleaning, milling, cutting, chopping, heating, pasteurizing, blanching, cooking, canning, freezing, drying, dehydrating, mixing, packaging or any other procedures that alter the food from its natural state.<sup>1</sup>

Processing may also include the addition of **preservatives** to extend shelf life and maintain food quality, **nutrients** to improve nutritional value, **additives** to enhance taste, texture and aroma, as well as approved substances like salt, sugars and fats.<sup>2</sup>

### FOOD SECURITY & SAFETY

Food processing is a critical step in ensuring food security for Canadians. **Food security** is the ability of every person to have access to sufficient, safe and nutritious food.<sup>3</sup>

Some of the most nutritious foods, like fruits, vegetables and meat, are also the most sensitive to spoiling. For centuries, people have preserved food by canning, freezing or drying to ensure access during times when it's unavailable or not in season.

Food preservation techniques also destroy **pathogens** (disease-causing microorganisms) and prevent food spoilage so that food is safe to eat.<sup>4</sup>

#### How is food processing regulated?

Food production, including food processing, is regulated by the Canadian Food Inspection Agency (CFIA) through the Safe Food for Canadians Regulations.<sup>5</sup> All food importers, manufacturers, packers, distributors, retailers, food services and institutions are responsible under Canadian law for the safety of the food they produce and distribute.



Milling wheat into flour



### HOW DIFFERENT FOODS ARE PROCESSED

**Processing wheat** into flour for bread or pasta is called **milling**. This involves removing weed seeds and other grains, grinding the kernels and separating out the different components.<sup>6</sup>

#### How all-purpose (white) flour is processed

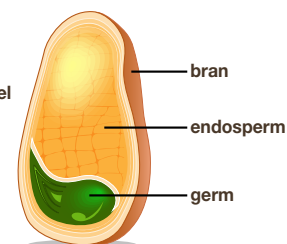
1. Germ and bran are separated from the kernel.
2. Flour is chemically treated (bleached) to remove the yellowish colour.
3. Nutrients removed during processing are added back in (enriched).
4. Flour is packaged.

**DYK? Whole grain flour contains the germ, bran and endosperm, and does not require enriching.**

wheat head



Inside a kernel of wheat



**Processing meat** involves slaughtering animals, cutting the meat, inspecting it to ensure it is safe for consumption, packaging and labelling, and processing it into products such as sausage or luncheon meats.<sup>7</sup>

Even **fresh fruit and vegetables** are processed before they arrive at the supermarket. This includes washing, sorting and packaging and/or labelling.



Harvesting and packaging cauliflower

# FOOD PROCESSING

## Processing is not the same as ultra-processed.

Ultra-processed foods typically contain multiple ingredients, are high in sugars, oils, fats and salts, are ready to eat and have sophisticated and attractive packaging.<sup>8</sup> Examples: sweetened breakfast cereals, many fast foods and snack foods.



Inspecting meat

**DYK:** a meat packer prepares animal products for wholesalers and grocery retails.

## Food labelling in Canada

Packaging and labelling are part of food processing. Labels contain useful information to trace the origin of the food, how to appropriately handle it and alert consumers about the presence of allergens to ensure safety.<sup>9</sup> They also provide information on nutritional content.

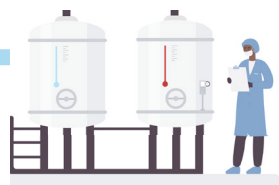
## MILK: THE PATH TO YOUR TABLE<sup>11</sup>



Milk is collected by milking machines and carried through a pipeline directly to large refrigerated stainless steel tanks where it is stored to reduce bacterial growth and keep it fresh.



Before leaving the farm, milk is sampled and evaluated by a certified milk grader. If it passes the test it is loaded onto a truck and transported to the processing plant where it's tested again before being unloaded. Only milk that's free of antibiotics is allowed to be processed.



Milk is **pasteurized** (heated to a high temperature and cooled rapidly) to eliminate bacteria, and **homogenized** (fat molecules are reduced in size and evenly distributed throughout the milk) for an even texture. The milk is also fortified with nutrients like vitamin A and D, then packaged and shipped to your local grocery store.



Cream is separated from the non-fat portion of milk, then added back in at the right quantity to create 4 varieties of milk: 3.25% (whole milk), 1% and 2% (partly skimmed milk), and 0% (skim milk).

## THE JOURNEY OF THE EGG



During processing, **eggs** are washed, graded by size, weight and shell quality then packed into cartons. Eggs that don't make the cut are processed into liquid, frozen or powdered form for restaurants and bakeries, or used for products like mayonnaise and shampoo.<sup>10</sup>



Milk